Title (en)

APPARATUS AND PROCESS FOR CREATION OF DENSELY PACKED PRECISION ALIGNED LAYER WOUND ELECTROMAGNETIC COILS FOR ELECTRIC MOTORS, VOICE COILS, AND GALVANOMETERS

Title (de)

VORRICHTUNG UND VERFAHREN ZUR HERSTELLUNG VON DICHT GEPACKTEN PRÄZISE AUSGERICHTETEN, LAGENGEWICKELTEN ELEKTROMAGNETISCHEN SPULEN FÜR ELEKTROMOTOREN, SCHWINGSPULEN UND GALVANOMETER

Title (fr)

APPAREIL ET PROCÉDÉ POUR LA CRÉATION DE BOBINES ÉLECTROMAGNÉTIQUES ENROULÉES EN COUCHES ALIGNÉES DE PRÉCISION À COMPACTAGE DENSE POUR MOTEURS ÉLECTRIQUES, BOBINES VOCALES ET GALVANOMÈTRES

Publication

EP 4275817 A1 20231115 (EN)

Application

EP 23171033 A 20230502

Priority

US 202263340164 P 20220510

Abstract (en)

An apparatus for creating an electromagnetic coil, including: a platform for building the coil; a dispenser to dispense a wire via a nozzle; a wire feeder to feed the wire through the dispenser; a coating applicator to apply a bondable overcoat to the wire, such that when a section of the wire is laid adjacent to another section of the wire, the bondable overcoats of the respective sections bond to each other; one or more actuators to provide at least three degrees of freedom to the dispenser and/or the platform; and a processor to control the one or more actuators to move the dispenser and/or platform such that the wire is dispensed at a specified location relative to the platform; wherein the processor controls the one or more actuators based on a program stored in a memory, the program including instructions for laying the wire according to a predetermined pattern.

IPC 8 full level

B22F 12/50 (2021.01); **B22F 12/53** (2021.01); **B22F 12/58** (2021.01); **B23K 9/04** (2006.01); **B29C 64/118** (2017.01); **B29C 64/209** (2017.01); **B33Y 10/00** (2015.01); **B33Y 30/00** (2015.01); **B33Y 40/10** (2020.01)

CPC (source: CN EP US)

B22F 12/50 (2021.01 - EP); **B22F 12/53** (2021.01 - EP); **B22F 12/58** (2021.01 - EP); **B29C 48/05** (2019.01 - EP); **B29C 48/154** (2019.01 - EP); **B29C 48/266** (2019.01 - EP); **B33Y 10/00** (2014.12 - EP); **B33Y 30/00** (2014.12 - EP); **B33Y 40/10** (2020.01 - EP); **H01F 41/06** (2013.01 - CN); **H01F 41/066** (2016.01 - US); **H01F 41/082** (2016.01 - CN); **H01F 41/096** (2016.01 - CN US); **H01F 41/098** (2016.01 - US); B22F 10/18 (2021.01 - EP); B22F 12/30 (2021.01 - EP)

Citation (search report)

- [XYI] US 10571642 B1 20200225 - COHEN ADAM [US], et al
- [X] US 10857730 B1 20201208 - COHEN ADAM [US], et al
- [Y] US 2016176118 A1 20160623 - REESE RILEY [US], et al
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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 23171033 A 20230502; CA 3198251 A 20230501; CN 202310492806 A 20230504; US 202318144754 A 20230508